

# PATENT SPECIFICATION

1,009,206



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Date of filing Complete Specification: February 12, 1963.

Application Date: February 16, 1962.

No. 6063/62

Complete Specification Published: November 10, 1965.

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Index at Acceptance:—B8 P (8J, 9A, 9J).

Int. Cl.:—B 65 d.

## COMPLETE SPECIFICATION

### DRAWINGS ATTACHED

#### Packaging

We, UNILEVER LIMITED, a Company registered under the laws of Great Britain, of Port Sunlight, in the County of Chester, England, do hereby declare the invention 5 for which we pray that a patent may be granted to us and the method by which it is to be performed, to be particularly described in and by the following statement:

This invention relates to packaging and 10 in particular to the aspect of packaging concerning closing containers with lids.

According to one aspect of the invention there is provided a container comprising a receptacle having a plurality of side walls, 15 and a lid closing the receptacle, the lid being so shaped in relation to the cross-section of the receptacle that the lid deforms the mid-portions of the side walls of the receptacle outwards from their natural 20 position.

The arrangement can be such that the lid deforms the side walls to make these convex, or if they are naturally convex to increase their convexity, and tend to draw 25 the corners of the receptacle inwards.

According to another aspect of the invention there is provided a container comprising a receptacle having a plurality of side walls, and a lid closing the 30 receptacle, the lid having convex sides which deform the side walls outwards.

According to yet another aspect of the invention there is provided a container comprising a receptacle having flat resilient 35 side walls, the receptacle being closed by a lid having convex sides which deform the side walls of the receptacle outwards and cause the corners of the receptacle to be drawn inwards.

40 The receptacle can have on the inside means under which side edges of the lid engage. Said means can be provided by a groove in which the side edges of the lid

engage.

The side walls of the receptacle can be 45 flexible and can be made of plastics material, for example polyvinyl chloride or polythene.

The lid can be a flat plate and may be made of cardboard.

50 The receptacle can be substantially quadrilateral in cross section, for example substantially square.

The lid can be provided with a tab by which the lid can be removed to open the 55 container. Preferably the tab is connected to the rest of the lid by a fold line, for example a score line or a pre-formed crease. In the case when side edges of the lid engage in said groove, the fold line is preferably 60 disposed inward of the side edge at which the tab is located so that the tab does not hinder the engagement of this side edge in said groove.

65 The receptacle can contain food, particularly food which has been filled into the receptacle by extrusion from a nozzle, for example ice cream or mousse, and is subsequently frozen.

By way of example, an embodiment of 70 the invention will now be described in greater detail with reference to the diagrammatic drawing accompanying the provisional specification, in which :

Figure 1 shows a perspective view of a 75 container according to the invention, part of the receptacle having been broken away for clarity;

Figure 2 shows the container of Figure 1 without its lid;

80 Figure 3 shows a plan of the lid before being fitted to close the receptacle; and

Figure 4 shows a plan of the lid after being fitted to close the receptacle.

The receptacle 1 is made of plastics 85 material and has four flat side walls 2 which

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are thin and flexible. The side walls taper slightly outwards from the bottom 3 of the receptacle to the open top. An internal groove 4 is arranged around the inside of the receptacle adjacent the top. Since the side walls 2 are thin, the groove 4 causes a ridge on the outside of the receptacle. The groove 4 is intended to be engaged by and to locate the side edges of a flat cardboard lid 7.

As clearly shown in Figures 3 and 4, the lid 7 has convex side edges 8, 9, 10 and 11. When the lid 7 is inserted into the open top of the receptacle, the resiliency of the thin side walls 2 allows the lid 7 to be correctly located with the side edges 8, 9, 10 and 11 snapping into the groove 4. The side edges due to their convex shape deform side walls 2 outwards and at the same time cause the corners of the receptacle to be drawn inwards. With this arrangement, there is little risk of gaps occurring between the side edges of the lid and the side walls 2 of the receptacle.

An opening tab 12 is connected to the lid 7 by a fold line 13 formed by a pre-formed crease. The fold line 13 is disposed inward of the side edge 8 at which the tab is located, the fold line 13 being disposed inward a distance substantially equal to the depth of the groove 4. Cuts 14 extend from the ends of the fold line 13 to the side edge 8. When the tab 12 is folded back to project at right angles to the lid 7, the side edge 8 can engage fully in the groove 4, as is shown in Figure 1 and as can be appreciated from Figure 4, this further reduces the risk of a gap occurring between the side edge 8 and the associated side wall 2.

This container is suitable for ice cream and similar products and can be used in place of the conventional circular cross-sectioned tubs.

An ice cream tub can be filled with ice cream in a plastic state, the soft ice cream being extruded through a nozzle, and a lid applied to close the filled tub. The closed tub is then deep frozen prior to storage or transport. During this deep freezing, the ice cream tends to expand and tends to dislodge the lid. With conventional cardboard tubs of circular cross-section, this problem is not difficult to overcome; but with receptacles having flexible sides, particularly receptacles of squarish cross-section, we have found that this problem is more acute because the expansion of the ice cream tends to flex the sides outwards

so that the lid is more readily dislodged or 60 so that gaps occur between the side edges of the lid and the walls of the receptacle. We have found that the container shown in the drawings gives a satisfactory solution to this problem. 65

#### WHAT WE CLAIM IS:—

1. A container comprising a receptacle having a plurality of side walls, and a lid closing the receptacle, the lid being so shaped in relation to the cross-section of 70 the receptacle that the lid deforms the mid-portions of the side walls of the receptacle outwards from their natural position.

2. A container as claimed in Claim 1 in which the arrangement is such that the lid 75 deforms the side walls to make these convex, or if they are naturally convex to increase their convexity, and tend to draw the corners of the receptacle inwards.

3. A container comprising a receptacle 80 having a plurality of side walls, and a lid closing the receptacle, the lid having convex sides which deform the side walls outwards.

4. A container comprising a receptacle having flat resilient side walls, the receptacle 85 being closed by a lid having convex sides which deform the side walls of the receptacle outwards and cause the corners of the receptacle to be drawn inwards.

5. A container as claimed in any one of 90 the preceding claims in which the receptacle has on the inside means under which side edges of the lid engage.

6. A container as claimed in Claim 5 in which said means is provided by a groove 95 in which the side edges of the lid engage.

7. A container as claimed in any one of the preceding claims in which the lid is a flat plate.

8. A container as claimed in Claims 6 100 and 7 combined in which the lid is provided with a tab by which the lid can be removed to open the container, the tab being connected to the rest of the lid by a fold line which is disposed inward of the side edge 105 at which the tab is located so that the tab does not hinder the engagement of this side edge in the groove.

9. A container substantially as hereinbefore described with reference to the 110 drawing accompanying the Provisional Specification.

10. A container as claimed in any one of the preceding Claims which contains ice cream or a similar product. 115

UNILEVER LIMITED.

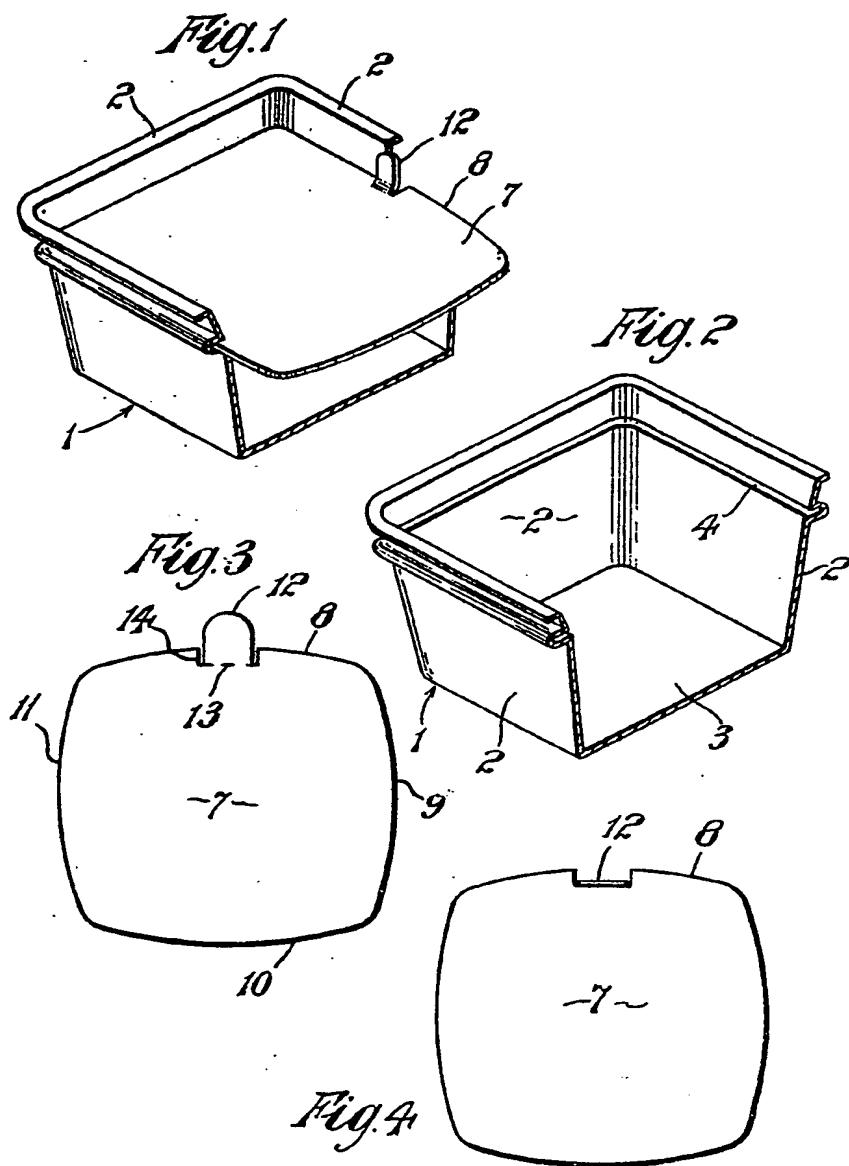
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1 SHEET

PROVISIONAL SPECIFICATION

*This drawing is a reproduction of  
the Original on a reduced scale*



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